

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: J. Kent Fortenberry, Technical Director
FROM: Timothy Hunt and Dave Kupferer, Pantex Site Representatives
DATE: 24 February 2006
SUBJECT: Pantex Plant Weekly Report

DNFSB Staff Activity: A. Matteucci and outside expert L. McGrew were onsite to observe the third week of the W87 Nuclear Explosive Safety Study (NESS).

Fire Protection: PXSO system engineers recently performed independent calculations of high pressure fire loop (HPFL) capabilities. The results of these calculations demonstrate that, in the event of an HPFL leak and subsequent HPFL valve realignments, it could be difficult for BWXT to quickly ascertain the operability of the fire suppression systems in nearby nuclear explosive facilities. BWXT is currently evaluating whether to purchase a software package that would be capable of providing fluid-flow modeling of the HPFL and associated systems. The type of digital model would allow BWXT to more easily determine the operability of fire suppression systems in real-time.

In addition, the Pantex safety basis requires that the HPFL be tested every five years to ensure that the underground piping has not degraded in a manner that would affect the operability of fire suppression systems in nuclear explosive facilities. In November 2005, BWXT completed the five-year testing. A couple of BWXT's test results were unrealistic in that the results suggested the flow properties of some sections of the cement-lined ductile iron pipe had significantly improved during the last five years. BWXT believes the valve alignments were not correct during the testing and plans to retest the subject pipe by August 2006. BWXT is currently planning multiple projects that are expected to replace large sections of the HPFL with high density polyethylene pipe during the next few years.

Seismic Analyses: In November 2005, BWXT initiated additional anchor bolt studies in three nuclear explosive facilities. These studies were completed last month. BWXT has determined that the results of the studies do not statistically justify accepting the risk of anchor bolt failure during a seismic event. Therefore, BWXT is developing an additional plan (to date there have been several iterations of the seismic project plan) to implement some seismic improvements and modify the corresponding safety basis documents. BWXT is hoping to complete this plan during the next few months.

12-64 Bays Upgrade Project: The construction contract to modify Building 12-64 was scheduled to be awarded in November 2005. The bids that were received greatly exceeded the baseline cost. During the past few months, BWXT and PXSO have been developing options for NNSA to determine whether to proceed with the 12-64 upgrade project and/or the Component Evaluation Facility (CEF) project in order to support Directed Stockpile Work mission requirements. The options include a variety of scenarios in which the 12-64 upgrade might be pursued in full, in part, or not at all. PXSO briefed NNSA headquarters staff last week on the aforementioned options and is awaiting NNSA's decision on the approved path forward.